



Pond Biosolids Removal and Reuse Project (CIP 13745)

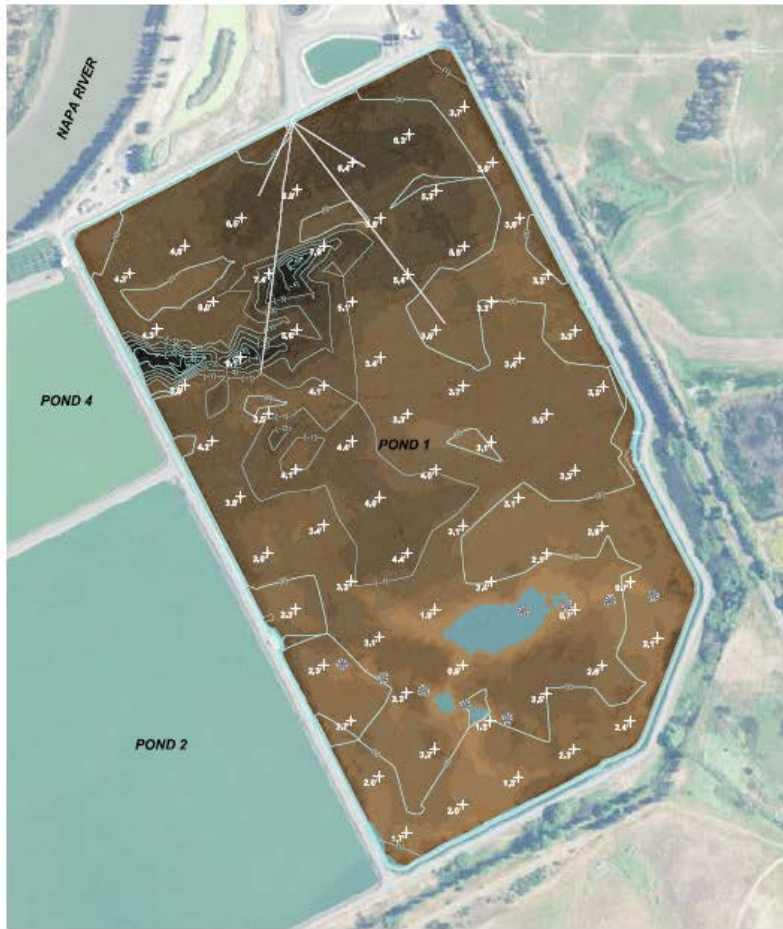


NapaSan Board of Directors Meeting
February 5, 2020

Background

- Recent biosolids removal projects were completed using various methods between 1999 and 2008





NOTES

HORIZONTAL DATUM: NAD83 STATE PLANE CALIFORNIA ZONE 2 (US FEET)
 VERTICAL DATUM: PER ULTRASONIC LEVEL GAGE AT NORTHWEST CORNER OF POND 1

DATA SOURCES:

SEA-TECH POND BOTTOM SURVEY, SEPTEMBER 20, 1988
 (DEPTH MEASUREMENTS CONVERTED TO SURVEY DATUM ASSUMING 11.1' DEPTH
 CORRESPONDS TO LEVEL GAGE READING OF 0.0')

SLUDGE BATHYMETRY DATA RECORDED BY NAPASAN OPERATIONS STAFF USING
 LOWRANGE LCR-25C

POND LEVEL WAS CONSTANT AT 93 INCHES (7.75 FEET) DURING SLUDGE BATHYMETRY SURVEY

ESTIMATED TOTAL SLUDGE VOLUME = 650,000 CY (403 ACRE FEET)

LEGEND

- 1.2' ± SLUDGE THICKNESS SPOT MEASUREMENTS
- CONTOURS OF POND BOTTOM SURFACE ELEVATION
- AERATOR LOCATIONS AS OF 5/20/17

SLUDGE THICKNESS BANDING KEY

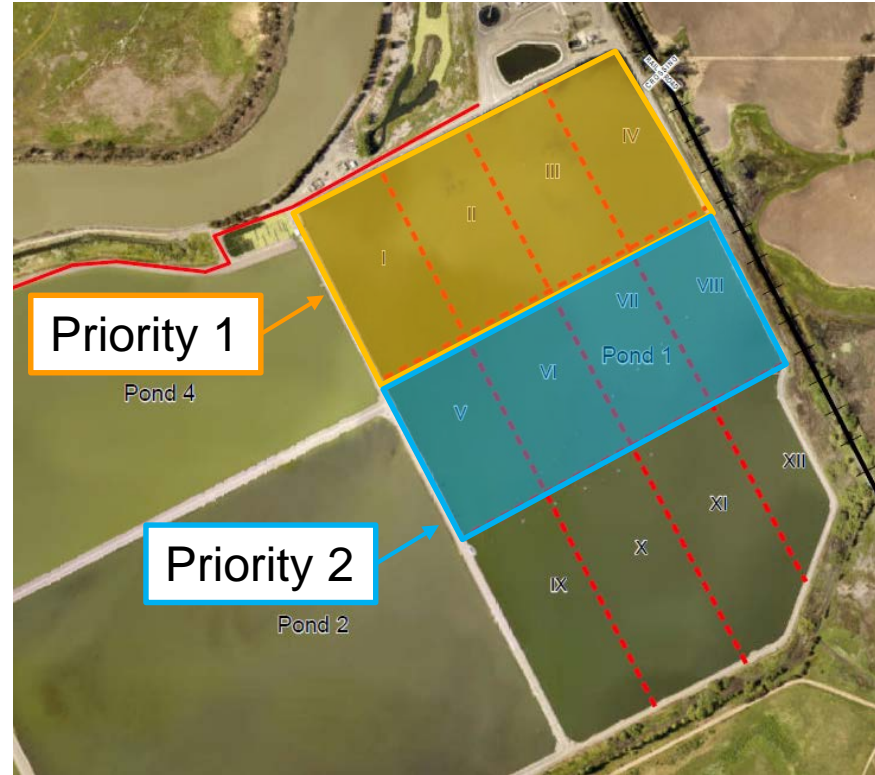
0.0' - 1.0'
1.0' - 2.0'
2.0' - 3.0'
3.0' - 4.0'
4.0' - 5.0'
5.0' - 6.0'
7.0' - 8.0'
8.0' - 9.0'
9.0' - 10.0'
10.0' - 11.0'
11.0' - 12.0'



POND SLUDGE DREDGE
 (CIP 13745)
**POND 1 BATHYMETRY SURVEY
 CALCULATED SLUDGE THICKNESS**
 DECEMBER, 2017

Biosolids Removal

- Remove biosolids to elevation 1.0 ft.
- Priority 1:
 - Northern 1/3 of pond
- Priority 2:
 - Middle 1/3 of pond





Bid Results

Contract Amount **\$2,000,000**

	Bidder	Unit Price Per Dry Ton	Total Dry Tons*
1	Clean Harbors Environmental Services	\$503.04	3,777
2	Synagro-WWT, Inc.	\$540.00	3,519
3	Merrell Bros., Inc.	\$564.64	3,365
4	American Process Group Inc.	\$606.45	3,133
5	National Plant Services, Inc.	\$1,376.00	1,381

*Total dry tons are based on \$1,900,000 budget for dredging and processing solids (\$100,000 of the budget is for contractor mobilization/demobilization).



Project Costs

Total Budget **\$2,337,150**

Item	Cost
Design	\$39,275
Construction Contract	\$2,000,000
Construction Management, Inspection, ESDC	\$205,135
Estimated Staff Time and Lab Analyses	\$50,000
Total:	\$2,294,410



Anticipated Schedule

Milestone	Date
Notice to Proceed	March 2020
Work Period	May 1 – September 30, 2020
Accept Completion	October 2020



Recommendation

- Award contract for the Pond Biosolids Removal and Reuse Project (CIP 13745) to Clean Harbors Environmental Services for the amount of \$2,000,000 and authorize the General Manager to execute the Agreement with the Contractor and issue the Notice to Proceed, when appropriate.